

ABSTRACT

BROADBAND RAMAN AMPLIFIER

The present invention provides a wide bandwidth, gain flattened Raman amplifier including a laser source of pump radiation, and means for producing from the pump source a plurality of wavelengths of pump radiation including means for providing adjustable optical feedback to the pump source at a plurality of radiation wavelengths.

Alternatively, instead of or in addition to the means for providing adjustable optical feedback, the invention may include means for independent power control of each wavelength.

The amplifier may include a coupler for coupling the pump radiation into the signal fibre and may include the fibre (which can be the transmission fibre) where the amplification takes place.

Fig. 2